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ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary**Application No.**

10/589,111

Applicant(s)

MERGLER, IWO-MARTIN

Examiner

DISLER PAUL

Art Unit

2614

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27;29-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27;29-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 2, 13-16, 20-21, 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regard claim 2, while, the prior art of record disclosed of an audio system for use with an audio source that provides an input audio signal, the system comprising: an acoustic source to combine an identification signal with the input audio signal to produce an output audio signal, the identification signal identifying the acoustic source; and a remote control device to control the acoustic source, to receive the output audio signal, and to distinguish the acoustic source from other acoustic sources based on the identification signal.

However, none of the prior art of record disclosed of further comprising another acoustic source configured to combine another identification signal that is different from the identification signal with the input audio signal to produce another output audio signal, wherein the remote control device is configured to receive the other output audio signal and to distinguish between the acoustic source and the other acoustic source based on the identification signals.

Similarly, Re claims 13, 20, have been analyzed and objected to for same reason as in claim 2.

RE claim 30, while, prior art of record disclosed of a remote control device for controlling an output audio signal provided by an acoustic source, the acoustic source combining an identification signal with an input audio signal to produce the output audio signal, the identification signal identifying the acoustic source, the remote control device comprising: circuitry, including an antenna, to receive the output audio signal; circuitry, including a processor, to process the received output audio signal to identify the acoustic source and to distinguish the acoustic source from other acoustic sources based on the identification signal; and circuitry, including a transmitter, to transmit a control signal to the identified acoustic source

However, none of the prior art of record disclosed of further wherein the remote control device is configured to store data that uniquely identifies a plurality of acoustic sources, and the remote control device configured to compare the identification signal received from the acoustic source to the stored data to distinguish the acoustic source from the other acoustic sources.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1; 3; 12, 17, 19; 26-27; 29 are rejected under 35 U.S.C. 102(e) as being anticipated over Griffith et al. (US 6,842,647 B1).

Re claim 1, Griffith et al. disclose of an audio system for use with an audio source that provides an input audio signal, the system comprising: an acoustic source to combine an identification signal with the input audio signal to produce an output audio signal, the identification signal identifying the acoustic source (fig.3 (30); col.2 line 64 - col.3 line 20; col.8 line 45-col.9 line 14/*send input audio tones signal and within such audio tone having an identification signal to help identify such audio command based on specific bit burst and specific (modulated FSK)); and a remote control device, to control the acoustic source; to receive the output audio signal, and to distinguish the audio source from other acoustic sources based on the identification signal (fig.3 (20,10); col.8 line 15-21; col.6 line 50-67 & col.7 line 10; col.6 line 35-50;/in response to command signal*

received from (FIS-control device) , the source generate appropriate signal in return thus denote controlling the acoustic source and inherently distinguish from other sources since it received and respond to only such command signal based on such specific n-burst and specific (modulated FSK) as command signal.

Re claim 3, the audio system as claimed in claim 1, wherein the input audio signal is modulated with the identification signal (col.8 line 45-61).

Re claim 12, the audio system as claimed in claim 1, further comprising circuitry to determine inherently the position of the remote control device relative to the acoustic source on the basis of the identification signal received at the remote control device (col.7 line 5-20/infor regarding *the strength of the information based on distance*).

Re claim 17, the audio system as claimed in claim 1, wherein the acoustic source is arranged such that the identification signal is included within the output audio signal and with a relatively high carrier frequency (col.5 line 25-32).

Re claim 19, Griffith et al. disclose of the method of controlling an acoustic source arranged for outputting an audio signal, the method comprising: combining an identification signal with an input audio signal to produce an output audio signal, the identification signal identifying the acoustic source (fig.3 (30,44); col.2 line 64 - col.3 line 20; col.8 line 45-col.9 line 14/*send input audio tones signal and within such audio tone*

having an identification signal to help identify such audio command based on specific bit burst and specific (modulated FSK)); receiving at a remote control device arranged for control of the acoustic source, the output audio signal; processing, by the remote control device, the received output audio signal to identify the acoustic source and to distinguish the acoustic source from other acoustic source sources based on the identification signal; and transmitting a control signal from the remote control device to the identified acoustic source (fig.3 (20,10); col.8 line 15-21; col.6 line 50-67 & col.7 line 10; col.6 line 35-50;/in response to command signal received from (FIS-control device) , the source generate appropriate signal in return thus denote controlling the acoustic source and inherently distinguish from other sources since it received and respond to only such command signal based on such specific n-burst and specific (modulated FSK) as command signal).

Re claim 26 has been analyzed and rejected with respect to claim 12.

Re claim 27, Griffith et al. disclosed of an acoustic source for use in an audio system which includes an audio source that provides an input audio signal, other acoustic sources and a remote control device that controls the acoustic sources responsive to respective an-output audio signals provided by each of the acoustic sources, the acoustic source comprising: circuitry to combine an identification signal with the input audio signal to produce one of the output audio signals, the identification signal identifying the acoustic source and distinguishing the acoustic source from the other

acoustic sources; and circuitry to provide the one output audio signal to the remote control device (fig.3 (40,42,44, 10,16)/sending acoustic sources for controlling; col.8 line 45-67/words with info for controlling the acoustic source for sending control signal, to change volume , select speech and other functions as desired).

Re claim 29, Griffith et al. disclose of a remote control device for controlling an output audio signal provided by an acoustic source, the acoustic source combining an identification signal with an input audio signal to produce the output audio signal, the identification signal identifying the acoustic source (fig.3 (30); col.2 line 64 - col.3 line 20; col.8 line 45-col.9 line 14), the remote control device comprising: circuitry, including an antenna, to receive the output audio signal; circuitry, including a processor, to process the received output audio signal to identify the acoustic source and to distinguish the acoustic source from other acoustic sources based on the identification signal (col.6 line 40-50; fig.3 (16) and (fig.3 (20,10); col.8 line 15-21; col.6 line 50-67 & col.7 line 10; col.6 line 35-50;/in response to *command signal received from (FIS-control device)* , the source generate appropriate signal in return thus denote controlling the acoustic source and inherently distinguish from other sources since it received and respond to only such command signal based on such specific n-burst and specific (modulated FSK) as command signal); and circuitry, including a transmitter, to transmit a control signal to the identified acoustic source (col.7 line 1-20, fig.3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffith et al. (US 6,842,647 B1) and Engebretson (US 5,475,759).

Re claim 4, the audio system as claimed in claim 1, But, Griffith et al. fail to disclose of the specific wherein the identification signal comprises a pseudo random noise signal. But, Engebretson disclose of a system wherein the similar concept of the identification signal comprises a pseudo random noise signal (fig.5 (111,se); col.8 line 60-65; col.12 line 5-11). Thus, taking the combined teaching of Griffith et al. and Engebretson as a whole, it would have been obvious for one of the ordinary skill in the art to have modified Griffith et al. with the identification signal comprises a pseudo random noise signal for effectively controlling the adaptive filter of the hearing aid.

Re claim 22, has been analyzed and rejected with respect to claim 4.

6. Claims 5-11; 18; 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffith et al. (US 6,842,647 B1) and Shennib (US 7,016,504 B1).

Re claim 5, the audio system as claimed in claim 1 with having distance between the source and remote control device (fig.3; col.5 line 45-60; col.6 line 15-25/operate only for such range distance parameter), but, Griffith et al. failed to disclose of the having a circuitry to determine the distance between the acoustic source and the control device.

But, Shennib disclose of a hearing device wherein the similar concept of having such a circuitry to determine the distance between an acoustic source and a control device (fig.5-9; col.3 line 42-47; col.9 line 43-67/acouststic source with sensor to detect distance/proximity of the source and the remote control/hearing aid located in the ear). Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with incorporating the circuitry to determine the distance between an acoustic source and the control device for automatically adjusting the sound at the hearing aid in the ear.

Re claims 23 have been analyzed and rejected with respect to claim 5.

Re claim 6, the audio system as in claim 5, the combined teaching of Griffith et al. and Shennib as a whole, would have disclosed of the circuitry to determine the said distance is responsive to a timed receipt of the identification signal (Shennib; fig.6; col.3 line 45-60; col.9 lien 45-65/based on time and wave back of the sound while the hearing aid is in the ear).

Re claim 7, the audio system as claimed in Claim 6, , the combined teaching of Griffith et al. and Shennib as a whole, would have disclosed of wherein the remote control device is arranged to generate a timing reference signal and transmit the timing reference signal to the acoustic source (Griffith, col.6 line 19-25/device respond with wave).

Re claim 8, the audio system as claimed in claim 6, wherein the acoustic source is arranged to produce a timing reference signal and to transmit an indication of that to the remote control unit (see claim 5 rejection analysis).

Re claim 9, the audio system as claimed in claim 5, wherein the said distance between the acoustic source and the remote control device is determined on the basis of the timed receipt of the audio output signal from the acoustic source at the remote control device (fig.5-9; col.3 line 42-47; col.9 line 43-67).

Re claim 10, the audio system as claimed in claim 1, wherein the remote control unit is arranged to transmit a controlling signal to the acoustic source serving to control the volume of the output audio signal (col.6 line 35-50; fig.3 (34,40,42,44) for controlling the volume of output signal).

However, Griffith et al. failed to disclose of the controlling in a manner responsive to a change in distance of the remote control device from the acoustic source. But, Shennib disclose of a hearing device wherein the similar concept of having a controlling signal in a manner responsive to a change in distance of the remote control device from the acoustic source (fig.5-9; col.3 line 42-47; col.9 line 43-67/acoustic source with sensor to detect distance/proximity of the source and the remote control/hearing aid located in the ear). Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with incorporating the a controlling signal in a manner responsive to a change in distance of the remote control device from the acoustic source for automatically adjusting the sound at the hearing aid in the ear.

Re claim 11, the audio system as claimed in Claim 10, wherein the change in distance is determined on the basis of a change in magnitude of the output audio signal as received at the remote control device (fig.11; col.3 line 42-47; col.9 line 43-67).

Re claims 24-25 have been analyzed and rejected with respect to claims 10-11 respectively.

Re claim 18, the audio system as claimed in Claim 17, but, Griffith et al. fail to disclose of the specific wherein the carrier frequency comprises at least a low ultrasound frequency. But, Shennib disclosed of a system with similar concept of having such

carrier frequency comprises an ultrasound frequency (fig.3; col.4 line 51-53; col. 5 line 47-52/transducer for emitting ultrasound signal frequency). Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with having the carrier frequency comprises an ultrasound frequency for inconspicuously transmitting the control signals.

While, the combined teaching of Griffith et al. and Shennib as a whole, never specify of the ultrasound frequency being a low ultrasound frequency, but it is noted having such specific of the frequency being a low ultrasound frequency is merely an obvious variation of the designer's choice based on his need. Thus, it would have been obvious to have modified the combination with having such frequency being a low ultrasound frequency since it is one of the many alternative well known method for inconspicuously transmitting the control signals.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DISLER PAUL whose telephone number is (571)270-1187. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. P./
Examiner, Art Unit 2614

/Vivian Chin/
Supervisory Patent Examiner, Art Unit 2614